

REMARKS

The applicant respectfully requests reconsideration of the rejections set forth in the official action in view of the foregoing amendments and the following remarks.

The Abstract

The Examiner objected to the Abstract because it does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). The Applicant notes that this application is the U.S. national phase of an international application under the PCT. MPEP 1893.03(e) states the following regarding the abstract in such cases.

When the international application is published as the pamphlet, the abstract is reproduced on the cover page of the publication, even though it appears on a separate sheet of the international application in accordance with PCT Rule 11.4(a). Thus the requirement of 37 CFR 1.52(b) that the abstract "commence on a separate sheet" does not apply to the copy of the application (pamphlet) communicated to the designated Offices by the International Bureau under PCT Article 20. Accordingly, it is improper for the examiner of the U.S. national stage application to require the applicant to provide an abstract commencing on a separate sheet if the abstract does not appear on a separate sheet in the pamphlet. Unless the abstract is properly amended under the U.S. rules during national stage processing, the abstract that appears on the cover page of the pamphlet will be the abstract published by the USPTO under 35 U.S.C. 122(b) and in any U.S. patent issuing from the application.

Accordingly, a new abstract on a separate sheet is not required for this application.

The Specification

The Specification has been amended at page 10 to correct the minor spelling and typographic errors in lines 20 and 35 as noted by the Examiner. No new matter is added by the amendments to the specification.

The Examiner also objected to the descriptive text at lines 20-25 of page 10. In making the objection the Examiner asserted that the descriptive text is inconsistent with Claim 7, lines 4 to 6. The Applicant notes that the subject matter of Claim 7 is clearly described at page 9, line 26, to page 10, line 20, and shown in Figure 6 of the drawings. Thus, there is clear written support for the subject matter of Claim 7 in the specification. The arrangement described at page 10, lines 20-25, is an alternate or

modified configuration relative to that describe at page 10, lines 3-20, and shown in Figure 6.

The Claims

Claims 1, 4, 5, and 6 have been amended to correct the informalities noted by the Examiner in the official action. No new matter is added by any of the amendments to those claims.

Claim Rejections

35 USC 112, Second Paragraph

The Examiner rejected Claims 1 and 8 under 35 USC 112, second paragraph. In making the rejection the Examiner explained that there is no antecedent basis for the term "the delay times" in line 8 of Claim 1 and in line 12 of Claim 8, or for the term "said early reflected energy" in line 10 of Claim 1 and in line 13 of Claim 8.

The second paragraph of 35 USC 112 is concerned with definiteness and completeness of the terms used in a claim to define the subject matter of the invention for which a patent is sought by an applicant. The statute makes no mention of a requirement for antecedent basis for terms. Indeed the Applicant notes that the Examiner was apparently able to understand the subject matter of Claims 1 and 8 sufficiently to relate the claimed subject matter to the patent references cited in the rejection under Section 103(a). Therefore, it appears that the terms used in Claims 1 and 8 do not render those claims so indefinite as to fail to meet the requirements of the second paragraph of Section 112. Accordingly, the rejection under 35 USC 112, second paragraph is believed to be improper. Nevertheless, and in order to further the prosecution of this application, Claims 1 and 8 have been amended to provide terms that have proper antecedent basis within the respective claims. There is no intent to limit the scope of the subject matter of Claims 1 and 8 expressed or implied by the amendments thereto.

35 USC 103(a)

The Examiner has rejected claims 1, 2, 3, 4, 5, 8, 9, 10, 11 and 12 under 35 USC 103(a) as patentable over US patent 5,862,233 – Poletti (1) in view of US patent 5,729,613 – Poletti (2).

In making the rejection, the Examiner stated: “Regarding Claim 1, Poletti (1) discloses a system that may be used in combination with or supplement by any other assisted reverberation system such as an in-line system, wherein the in-line system may be added to allow control of the early reflection sequence (i.e. in-line early reflection enhancement generation system) (column 6, lines 21-25).”

However, column 6, lines 21-25 of Poletti (1) refer to supplementation of the non-in-line reverberation system disclosed in Poletti (1) “... by any other assisted reverberation system such as an in-line system for example.” A reverberation system is one which has “... an impulse response consisting of a number of echoes, the density of which increases over time” – see Poletti (1), claim 1.

Claim 1 has now been amended to recite “an early reflection generation stage which *has a finite impulse response and which without internal feedback* generates a number of delayed *discrete* reproductions of the microphone signals and which has unitary power gain . . .” (Emphasis added). Method claim 8 has been similarly amended.

The in-line early reflection enhancement system of the subject invention is not a reverberation system. It does not have such an impulse response. That is, it does not produce a response that has an infinitely long decay time. The Applicant’s claimed system as set forth in Claims 1 and the claimed method as set forth in Claim 8 produces a finite impulse response, consisting of a relatively low

number of discrete echoes. In the unitary early reflection system and method according to the Applicant's claimed invention there is no recursion in the reflection system. In other words, there is no feedback of the outputs of the delay lines to the inputs of the delay lines. In contrast to a reverberator, the impulse response of the claimed reflection enhancement system is finite – the response to an impulse is a short burst of echoes, then silence. The density of the echoes will not reach that of a reverberator. Typically a system accordingly to the Applicant's claimed invention will have a response time of only 80 ms, and the echo density does not reach that of a reverberator.

Poletti (2) also discloses a reverberator, as referred to above. The device contains multiple channels which have internal feedback. That feedback creates a response having an infinitely long decay time and a rapidly increasing density of echoes which are perceived as reverberation.

Thus, use of the in-line unitary system of Poletti (2) in combination with or to supplement Poletti (1) as proposed by the Examiner, would not provide a system that is the same as the Applicant's claimed system as set forth in Claim 1 nor would it carry out the Applicant's claimed method as set forth in claim 8. These claims and the claims dependent thereon are therefore patentably distinct from the Examiner's proposed combination of the references relied on.

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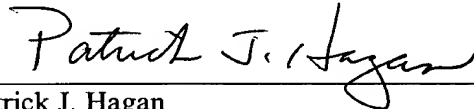
Examiner COREY P. CHAU
Art Unit 2644

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that this application is now in condition for allowance. The Examiner is respectfully requested to reconsider the application in the light of the amendments and remarks presented hereinabove.

Respectfully submitted,

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